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Patent Docket P1713R1

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of Mark S. Dennis Serial No.: To be Assigned Filed: June 30, 2000 For: COMPOUNDS THAT BIND HER2	Group Art Unit: NOT KNOWN Examiner: NOT KNOWN **CERTIFICATION UNDER 37 CFR 1.10** EL 141 796 365 US: Express Mail Number June 30, 2000: Date of Deposit I hereby certify that this correspondence, consisting of specification, Non-Provisional Application Transmittal, Certificate Re: Sequence Listing Response Under 37 CFR § 1,821(f) and (g), Sequence Listing, sequence listing diskette, Combined Declaration for Patent Application and Power of Attorney, postcard, is being deposited with the United States Postal Service "Express Mail Post Office to Addressee" service under 37 CFR 1.10 on the date indicated above and is addressed to the Assistant Commissioner of Patents, Washington, D.C. 20231. Pamela Gavette Pamela Gavette

CERTIFICATE RE: SEQUENCE LISTING

BOX SEQUENCES
Assistant Commissioner of Patents
Washington, D.C. 20231

Sir:

I hereby state that the Sequence Listing submitted herewith is submitted in paper copy and a computer-readable diskette, and that the information recorded in computer readable form is identical to the written sequence listing.

Respectfully submitted,

GENENTECH, INC.

Date: June 30, 2000

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Sequence Listing

<110> Mark S. Dennis

<120> Compounds that Bind HER2

<130> P1713R1

<141> 2000-06-30

<150> US 60/142,232
<151> 1999-07-02

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Trp Cys

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Trp Cys

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Trp Cys

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Leu Gln Ala Cys Leu
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Leu Leu Ala Cys Leu
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Cys Leu

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Cys Ile

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Cys Leu

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Leu

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Leu

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Leu

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Leu

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Leu

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Leu

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Leu

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Leu

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Leu

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Leu Xaa Xaa Xaa Xaa
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Cys Gly Leu Gly Cys Gly Trp Val Val Glu Ala Cys
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Cys Gly Pro Gly Cys Gly Leu Val Val Asn Ala Cys
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Cys Gly Gly Gly Cys Gly Trp Val Val Asn Val Cys
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Cys Gly Gly Gly Cys Gly Trp Val Gly Glu Ala Cys
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Cys Gly Leu Gly Cys Gly Trp Val Ala Asp Ala Cys
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Val Phe Gly Ala His
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Leu Phe Asp Ala His
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Leu Phe Glu Ala Phe
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Leu Phe Glu Ala His
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Cys Xaa Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Xaa Cys
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Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys
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Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr
50 55 60

Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser
65 70 75

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Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr
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Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys
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Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr
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Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val Ser
               125                 130                 135

Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val
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Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr
               155                 160                 165

Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys
               170                 175                 180

Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser
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 Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val
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 Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys
                35                  40                  45

 Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr
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 Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser
                65                  70                  75

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 Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys
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Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val
                140                 145                 150

Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr
                155                 160                 165

Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys
                170                 175                 180

Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser
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Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys
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Ser Leu Ser Leu Ser Pro Gly Lys
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Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Gln Phe
                35                  40                  45

Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys
                50                  55                  60

Pro Arg Glu Glu Gln Phe Asn Ser Thr Phe Arg Val Val Ser Val
                65                  70                  75

Leu Thr Val Val His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys
                80                  85                  90

Cys Lys Val Ser Asn Lys Gly Leu Pro Ala Pro Ile Glu Lys Thr
                95                 100                 105

Ile Ser Lys Thr Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr
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Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val Ser Leu
                125                 130                 135
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Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu
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Pro Met Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu
170 175 180

Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys
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Leu Ser Leu Ser Pro Gly Lys
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Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro
1 5 10 15

Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val
20 25 30

Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Gln
35 40 45

Phe Lys Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr
50 55 60

Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Phe Arg Val Val Ser
65 70 75

Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr
80 85 90

Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys
95 100 105

Thr Ile Ser Lys Thr Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr
110 115 120

Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val Ser
125 130 135

Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val
140 145 150

Glu Trp Glu Ser Ser Gly Gln Pro Glu Asn Asn Tyr Asn Thr Thr
155 160 165

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Pro Pro Met Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys
                170                 175                 180

Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Ile Phe Ser
                185                 190                 195

Cys Ser Val Met His Glu Ala Leu His Asn Arg Phe Thr Gln Lys
                200                 205                 210

Ser Leu Ser Leu Ser Pro Gly Lys
                215
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<210> 76
<211> 218
<212> PRT
<213> Homo sapiens

<400> 76

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Pro Ala Pro Glu Phe Leu Gly Gly Pro Ser Val Phe Leu Phe Pro
  1               5                  10                  15

Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val
                20                  25                  30

Thr Cys Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln
                35                  40                  45

Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr
                50                  55                  60

Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser
                65                  70                  75

Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr
                80                  85                  90

Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu Lys
                95                 100                 105

Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr
                110                 115                 120

Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln Val Ser
                125                 130                 135

Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val
                140                 145                 150

Glu Trp Glx Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr
                155                 160                 165

Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg
                170                 175                 180

Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser
                185                 190                 195
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Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys
200 205 210

Ser Leu Ser Leu Ser Leu Gly Lys
215

<210> 77
<211> 215
<212> PRT
<213> Mus musculus

<400> 77
Thr Val Pro Glu Val Ser Ser Val Phe Ile Phe Pro Pro Lys Pro
1 5 10 15

Lys Asp Val Leu Thr Ile Thr Leu Thr Pro Lys Val Thr Cys Val
20 25 30

Val Val Asp Ile Ser Lys Asp Asp Pro Glu Val Gln Phe Ser Trp
35 40 45

Phe Val Asp Asp Val Glu Val His Thr Ala Gln Thr Gln Pro Arg
50 55 60

Glu Glu Gln Phe Asn Ser Thr Phe Arg Ser Val Ser Glu Leu Pro
65 70 75

Ile Met His Gln Asp Cys Leu Asn Gly Lys Glu Phe Lys Cys Arg
80 85 90

Val Asn Ser Ala Ala Phe Pro Ala Pro Ile Glu Lys Thr Ile Ser
95 100 105

Lys Thr Lys Gly Arg Pro Lys Ala Pro Gln Val Tyr Thr Ile Pro
110 115 120

Pro Pro Lys Glu Gln Met Ala Lys Asp Lys Val Ser Leu Thr Cys
125 130 135

Met Ile Thr Asp Phe Phe Pro Glu Asp Ile Thr Val Glu Trp Gln
140 145 150

Trp Asn Gly Gln Pro Ala Glu Asn Tyr Lys Asn Thr Gln Pro Ile
155 160 165

Met Asp Thr Asp Gly Ser Tyr Phe Val Tyr Ser Lys Leu Asn Val
170 175 180

Gln Lys Ser Asn Trp Glu Ala Gly Asn Thr Phe Thr Cys Ser Val
185 190 195

Leu His Glu Gly Leu His Asn His His Thr Glu Lys Ser Leu Ser
200 205 210

His Ser Pro Gly Lys
215

<210> 78
<211> 218
<212> PRT
<213> Mus musculus

<400> 78

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 Pro Ala Pro Asn Leu Leu Gly Gly Pro Ser Val Phe Ile Phe Pro
   1               5                  10                  15

 Pro Lys Ile Lys Asp Val Leu Met Ile Ser Leu Ser Pro Ile Val
                20                  25                  30

 Thr Cys Val Val Val Asp Val Ser Glu Asp Asp Pro Asp Val Gln
                35                  40                  45

 Ile Ser Trp Phe Val Asn Asn Val Glu Val His Thr Ala Gln Thr
                50                  55                  60

 Gln Thr His Arg Glu Asp Tyr Asn Ser Thr Leu Arg Val Val Ser
                65                  70                  75

 Ala Leu Pro Ile Gln His Gln Asp Trp Met Ser Gly Lys Glu Phe
                80                  85                  90

 Lys Cys Lys Val Asn Asn Lys Asp Leu Pro Ala Pro Ile Glu Arg
                95                 100                 105

 Thr Ile Ser Lys Pro Lys Gly Ser Val Arg Ala Pro Gln Val Tyr
               110                 115                 120

 Val Leu Pro Pro Pro Glu Glu Glu Met Thr Lys Lys Gln Val Thr
               125                 130                 135

 Leu Thr Cys Met Val Thr Asp Phe Met Pro Glu Asp Ile Tyr Val
               140                 145                 150

 Glu Trp Thr Asn Asn Gly Lys Thr Glu Leu Asn Tyr Lys Asn Thr
               155                 160                 165

 Glu Pro Val Leu Asp Ser Asp Gly Ser Tyr Phe Met Tyr Ser Lys
               170                 175                 180

 Leu Arg Val Glu Lys Lys Asn Trp Val Glu Arg Asn Ser Tyr Ser
               185                 190                 195

 Cys Ser Val Val His Glu Gly Leu His Asn His His Thr Thr Lys
               200                 205                 210

 Ser Phe Ser Arg Thr Pro Gly Lys
               215
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<210> 79
<211> 218
<212> PRT
<213> Mus musculus

<400> 79
Pro Ala Pro Asn Leu Glu Gly Gly Pro Ser Val Phe Ile Phe Pro
1 5 10 15

Pro Asn Ile Lys Asp Val Leu Met Ile Ser Leu Thr Pro Lys Val
20 25 30

Thr Cys Val Val Val Asp Val Ser Glu Asp Asp Pro Asp Val Gln
35 40 45

Ile Ser Trp Phe Val Asn Asn Val Glu Val His Thr Ala Gln Thr
50 55 60

Gln Thr His Arg Glu Asp Tyr Asn Ser Thr Ile Arg Val Val Ser
65 70 75

His Leu Pro Ile Gln His Gln Asp Trp Met Ser Gly Lys Glu Phe
80 85 90

Lys Cys Lys Val Asn Asn Lys Asp Leu Pro Ser Pro Ile Glu Arg
95 100 105

Thr Ile Ser Lys Pro Lys Gly Leu Val Arg Ala Pro Gln Val Tyr
110 115 120

Thr Leu Pro Pro Pro Ala Glu Gln Leu Ser Arg Lys Asp Val Ser
125 130 135

Leu Thr Cys Leu Val Val Gly Phe Asn Pro Gly Asp Ile Ser Val
140 145 150

Glu Trp Thr Ser Asn Gly His Thr Glu Glu Asn Tyr Lys Asp Thr
155 160 165

Ala Pro Val Leu Asp Ser Asp Gly Ser Tyr Phe Ile Tyr Ser Lys
170 175 180

Leu Asn Met Lys Thr Ser Lys Trp Glu Lys Thr Asp Ser Phe Ser
185 190 195

Cys Asn Val Arg His Glu Gly Leu Lys Asn Tyr Tyr Leu Lys Lys
200 205 210

Thr Ile Ser Arg Ser Pro Gly Lys
215

<210> 80
<211> 218
<212> PRT
<213> Mus musculus

<400> 80
Pro Pro Gly Asn Ile Leu Gly Gly Pro Ser Val Phe Ile Phe Pro
1 5 10 15

Pro Lys Pro Lys Asp Ala Leu Met Ile Ser Leu Thr Pro Lys Val
20 25 30

Thr Cys Val Val Val Asp Val Ser Glu Asp Asp Pro Asp Val His
35 40 45

Val Ser Trp Phe Val Asp Asn Lys Glu Val His Thr Ala Trp Thr
50 55 60

Gln Pro Arg Glu Ala Gln Tyr Asn Ser Thr Phe Arg Val Val Ser
65 70 75

Ala Leu Pro Ile Gln His Gln Asp Trp Met Arg Gly Lys Glu Phe
80 85 90

Lys Cys Lys Val Asn Asn Lys Ala Leu Pro Ala Pro Ile Glu Arg
95 100 105

Thr Ile Ser Lys Pro Lys Gly Arg Ala Gln Thr Pro Gln Val Tyr
110 115 120

Thr Ile Pro Pro Pro Arg Glu Gln Met Ser Lys Lys Lys Val Ser
125 130 135

Leu Thr Cys Leu Val Thr Asn Phe Phe Ser Glu Ala Ile Ser Val
140 145 150

Glu Trp Glu Arg Asn Gly Glu Leu Glu Gln Asp Tyr Lys Asn Thr
155 160 165

Pro Pro Ile Leu Asp Ser Asp Gly Thr Tyr Phe Leu Tyr Ser Lys
170 175 180

Leu Thr Val Asp Thr Asp Ser Trp Leu Gln Gly Glu Ile Phe Thr
185 190 195

Cys Ser Val Val His Glu Ala Leu His Asn His His Thr Gln Lys
200 205 210

Asn Leu Ser Arg Ser Pro Gly Lys
215

<210> 81
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic peptide sequence

<400> 81
Gln Val Tyr Glu Ser Trp Gly Cys Ile Gly Pro Gly Cys Ala Cys
1 5 10 15

Leu Gln Ala Cys Leu
20

<210> 82
<211> 46
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic peptide sequence

<400> 82
Gln Val Tyr Glu Ser Trp Gly Cys Ile Gly Pro Gly Cys Ala Cys
1 5 10 15

Leu Gln Ala Cys Leu Gly Gly Gly Ser Gly Gly Gln Val Tyr Glu
20 25 30

Ser Trp Gly Cys Ile Gly Pro Gly Cys Ala Cys Leu Gln Ala Cys
35 40 45

Leu

<210> 83
<211> 27
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic peptide sequence

<400> 83
Cys Ala Trp Val Ser Val Glu Cys Gly Gly Glu Trp Trp His Cys
1 5 10 15

Cys Gly Pro Gly Cys Gly Trp Val Val Asp Ala Cys
20 25

<210> 84
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic peptide sequence

<400> 84
Tyr Ser Phe Glu Gly Trp Gly Cys Ile Gly Pro Gly Cys Ala Tyr
1 5 10 15

Leu Phe Glu Gly His
20

<210> 85
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic peptide sequence

<400> 85
Tyr Glu Trp Glu Gly Trp Gly Cys Ile Gly Pro Gly Cys Pro Ala
1 5 10 15

Leu Gly Phe Gly Tyr
20

<210> 86
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic peptide sequence

<400> 86
Gln Arg Asn Glu Ala Trp Gly Cys Ile Gly Pro Gly Cys Glu Met
1 5 10 15

Leu Cys Ala Trp Cys
20

<210> 87
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic peptide sequence

<400> 87
Thr Gln Ala Glu Arg Trp Gly Cys Ile Gly Pro Gly Cys Glu Cys
1 5 10 15

Leu Met Ser Cys Val
20

<210> 88
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic peptide sequence

<400> 88
Cys Ile Asp Glu Thr Trp Gly Cys Ile Gly Pro Gly Cys Glu Glu
1 5 10 15

Leu Arg Cys Lys Arg
20

<210> 89
<211> 17
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic peptide sequence

<400> 89
Asn Val Cys Glu Phe Trp Gly Cys Ile Gly Pro Gly Cys Ala Gln
1 5 10 15

Leu Cys

<210> 90
<211> 27
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic peptide sequence

<220>
<221> Mutagen
<222> 1-14, 16, 21-27
<223> More than one possible amino acid

<400> 90
Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Cys
1 5 10 15

Xaa Gly Pro Gly Cys Xaa Xaa Xaa Xaa Xaa Xaa Xaa
20 25

<210> 91
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic peptide sequence

<220>
<221> Mutagen
<222> 1-3, 5, 14-15, 17-20
<223> More than one possible amino acid

<400> 91
Xaa Xaa Xaa Glu Xaa Trp Gly Cys Ile Gly Pro Gly Cys Xaa Xaa
1 5 10 15

Leu Xaa Xaa Xaa Xaa
20

<210> 92
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic peptide sequence

<220>
<221> Mutagen
<222> 1-7, 9, 14-20
<223> More than one possible amino acid

<400> 92
Xaa Xaa Xaa Xaa Xaa Xaa Xaa Cys Xaa Gly Pro Gly Cys Xaa Xaa
1 5 10 15

Xaa Xaa Xaa Xaa Xaa
20

<210> 93
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic peptide sequence

<220>
<221> Mutagen
<222> 1-5, 7, 9, 14-20
<223> More than one possible amino acid

<400> 93
Xaa Xaa Xaa Xaa Xaa Trp Xaa Cys Xaa Gly Pro Gly Cys Xaa Xaa
1 5 10 15

Xaa Xaa Xaa Xaa Xaa
20

<210> 94
<211> 4
<212> PRT
<213> Artificial Sequence

<220>
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<400> 94
Phe Gly Ala His
1

<210> 95
<211> 4
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic peptide sequence

<400> 95
Phe Asp Ala His
1

<210> 96
<211> 4
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic peptide sequence

<400> 96
Leu Glu Ala His
1

<210> 97
<211> 4
<212> PRT
<213> Artificial Sequence

<220>
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<400> 97
Phe Glu Gly His
1

<210> 98
<211> 4
<212> PRT
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<220>
<223> synthetic peptide sequence

<400> 98
Phe Gly Ala Leu
1

<210> 99
<211> 4
<212> PRT
<213> Artificial Sequence

<220>
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<400> 99
Phe Glu Ala Tyr
1

<210> 100
<211> 4
<212> PRT
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<220>
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<400> 100
Phe Ala Gly His
1

<210> 101
<211> 4
<212> PRT
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<220>
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<400> 101
Phe Glu Ala Phe
1

<210> 102
<211> 4
<212> PRT
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<220>
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<400> 102
Gln Ala Cys Met
1

<210> 103
<211> 4
<212> PRT
<213> Artificial Sequence

<220>
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<400> 103
Leu Gln Cys Trp
1

<210> 104
<211> 4
<212> PRT
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<220>
<223> synthetic peptide sequence

<400> 104
Met Ser Cys Val
1

<210> 105
<211> 4
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic peptide sequence

<400> 105
Leu Arg Cys Ile
1

<210> 106
<211> 4
<212> PRT
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<220>
<223> synthetic peptide sequence

<400> 106
Gln Ala Cys Leu
1

<210> 107
<211> 4
<212> PRT
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<220>
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<400> 107
Leu Ser Cys Leu
1

<210> 108
<211> 4
<212> PRT
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<220>
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<400> 108
Ile Gly Cys Leu
1

<210> 109
<211> 4
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic peptide sequence

<400> 109
Leu Ala Cys Leu
1

<210> 110
<211> 4
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic peptide sequence

<400> 110
Leu Ser Cys Ile
1

<210> 111
<211> 4
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic peptide sequence

<400> 111
Met Asn Cys Leu
1

<210> 112
<211> 4
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic peptide sequence

<400> 112
Leu Arg Cys Leu
1

<210> 113
<211> 4
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic peptide sequence

<400> 113
Leu Lys Cys Leu
1

<210> 114
<211> 4
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic peptide sequence

<400> 114
Leu Gly Cys Leu
1

<210> 115
<211> 4
<212> PRT
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<220>
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<400> 115
Leu Asn Cys Ile
1

<210> 116
<211> 4
<212> PRT
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<220>
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<400> 116
Met Gly Cys Leu
1

<210> 117
<211> 4
<212> PRT
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<220>
<223> synthetic peptide sequence

<400> 117
Met Ala Cys Leu
1

<210> 118
<211> 4
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic peptide sequence

<400> 118
Cys Ala Trp Cys
1

<210> 119
<211> 4
<212> PRT
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<220>
<223> synthetic peptide sequence

<400> 119
Cys Ser Trp Cys
1

<210> 120
<211> 4
<212> PRT
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<220>
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<400> 120
Cys Glu Pro Cys
1

<210> 121
<211> 4
<212> PRT
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<220>
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<400> 121
Cys Asp Trp Cys
1

<210> 122
<211> 4
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic peptide sequence

<400> 122
Cys Glu Trp Cys
1

<210> 123
<211> 4
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<220>
<223> synthetic peptide sequence

<400> 123
Cys Asn Trp Cys
1

<210> 124
<211> 4
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic peptide sequence

<400> 124
Cys Gly Trp Cys
1

<210> 125
<211> 27
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic peptide sequence

<220>
<221> Mutagen
<222> 2-7, 9-14, 17-19, 21-26
<223> More than one possible amino acid

<400> 125
Cys Xaa Xaa Xaa Xaa Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Xaa Cys
1 5 10 15

Cys Xaa Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Xaa Cys
20 25

<210> 126
<211> 27
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic peptide sequence

<220>
<221> Mutagen
<222> 1-10, 12, 14, 21-27
<223> More than one possible amino acid

<400> 126
Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Glu Xaa Trp Xaa Cys
1 5 10 15

Cys Gly Pro Gly Cys Xaa Xaa Xaa Xaa Xaa Xaa Xaa
20 25

<210> 127
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<221> Mutagen
<222> 2, 5-7, 9
<223> More than one possible amino acid

<400> 127
Cys Xaa Trp Val Xaa Xaa Xaa Cys Xaa Gly
1 5 10

<210> 128
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic peptide sequence

<220>
<221> Mutagen
<222> 6-7
<223> More than one possible amino acid

<400> 128
Cys Ala Trp Val Leu Xaa Xaa Cys Gly Gly
1 5 10

<210> 129
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic peptide sequence

<400> 129
Gly Gly Gly Ser Gly Gly
1 5

<210> 130
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic peptide sequence

<400> 130
Gly Gly Gly Ser Ser Gly
1 5

<210> 131
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic peptide sequence

<400> 131
Gly Gly Gly Arg Gly Gly
1 5

<210> 132
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic peptide sequence

<400> 132
Tyr Glu Val Glu Ala Trp Asp Cys Met Gly Pro Gly Cys Ala Asn
1 5 10 15

Leu Phe Glu Ala His
20

<210> 133
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic peptide sequence

<400> 133
Ser Ser Glu Cys Ala Cys Asp Lys Gly Gly Arg Arg Val Leu Cys
1 5 10 15

Ile Asn Lys Val Gly
20

<210> 134
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic peptide sequence

<400> 134
Glu Pro His Gly Cys Ser Leu Trp Asp Trp Glu Leu Arg Thr Cys
1 5 10 15

Ser Glu Tyr Ala Asn
20

<210> 135
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic peptide sequence

<400> 135
Lys Glu Arg Pro Cys Ala Gly Asp Ala Pro Arg Lys Gly Val Cys
1 5 10 15

His Val Ala Thr His
20

<210> 136
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic peptide sequence

<400> 136
Lys Val Arg Ser Cys Ile Glu Glu Ser Leu Asp Thr Arg Arg Cys
1 5 10 15

Tyr Leu Val Val Glu
20

<210> 137
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic peptide sequence

<400> 137
Ala Lys Thr Ser Ser Cys Gly Glu His Glu Glu Arg Arg Ala Val
1 5 10 15

Cys Val Leu Ser Arg
20

<210> 138
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
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<400> 138
Lys Val Trp Ser Val Gln Ser Pro
1 5

<210> 139
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic peptide sequence

<400> 139
Gly Lys Val Gln Arg Cys Ile Pro
1 5

<210> 140
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic peptide sequence

<400> 140
Gln Thr Cys Arg Arg Val Leu Cys Leu Pro
1 5 10

<210> 141
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic peptide sequence

<400> 141
Arg Val Trp Thr Trp Arg Trp Asn
1 5

<210> 142
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic peptide sequence

<400> 142
Arg Ile Cys Thr Thr Pro Cys Ala Val
1 5

<210> 143
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic peptide sequence

<400> 143
Thr Ser Cys Arg Arg Val Phe Cys Ala Val
1 5 10

<210> 144
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic peptide sequence

<400> 144
Arg Val Cys Thr Gly Cys Val Thr
1 5

<210> 145
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic peptide sequence

<400> 145
Lys Val Cys Thr Arg Val Cys Cys Gly Thr
1 5 10

<210> 146
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic peptide sequence

<400> 146
His Pro Cys His Met Arg Val Leu Cys Ala Ala
1 5 10

<210> 147
<211> 13
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic peptide sequence

<400> 147
Arg Gly Cys Lys Ala Thr Gly Lys Val Leu Cys Ser Leu
1 5 10

<210> 148
<211> 12
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic peptide sequence

<400> 148
Ser Gly Cys Leu Arg Ala Val Gly Ala Cys Asn Thr
1 5 10

<210> 149
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic peptide sequence

<400> 149
Ala Gly Cys Gly Ser Lys Ala Val Cys Val Ser
1 5 10

<210> 150
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic peptide sequence

<400> 150
Arg Val Trp Thr Ala Pro Gln Cys Leu Ile
1 5 10

<210> 151
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic peptide sequence

<400> 151
Lys Val Cys His Ala Ser Ser Gly Cys Val Ala
1 5 10

<210> 152
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic peptide sequence

<400> 152
Arg Ala Cys Gln Arg Ala Cys Leu Cys Pro Ala
1 5 10

<210> 153
<211> 16
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic peptide sequence

<400> 153
Arg Ser Cys Ala Asp Val Ala Ser Arg Cys Trp Glu His Cys Ile
1 5 10 15

Thr

<210> 154
<211> 16
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic peptide sequence

<400> 154
Thr Asp Cys Gly Arg Val Ala Ser Val Cys Trp Glu Ser Cys Leu
1 5 10 15

Ile

<210> 155
<211> 19
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic peptide sequence

<400> 155
Cys Cys Glu Thr Arg Trp Trp Cys Gln Trp Gly Phe Cys Ser Gly
1 5 10 15

Ser Ala Cys Cys

<210> 156
<211> 12
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic peptide sequence

<400> 156
Gly Cys Lys Arg Val Cys Ser Leu Gly Val Met Cys
1 5 10

<210> 157
<211> 27
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic peptide sequence

<400> 157
Cys Ser Trp Val Leu Val Gln Cys Gly Gly Glu Trp Trp His Cys
1 5 10 15

Cys Gly Leu Gly Cys Gly Leu Val Val Asn Ala Cys
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Xaa Xaa Xaa Xaa Xaa
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